




UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/000,057	11/01/2001	Jason E. Dargontina	06 1421 01 01	9505
26813	7590	05/04/2004	EXAMINER	
MUETING, RAASCH & GEBHARDT, P.A. P.O. BOX 581415 MINNEAPOLIS, MN 55458			BISSETT, MELANIE D	
			ART UNIT	PAPER NUMBER
			1711	

DATE MAILED: 05/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<p align="center">Office Action Summary</p>	Application No. 10/000,057	Applicant(s) DARGONTINA ET AL.	
	Examiner Melanie D. Bissett	Art Unit 1711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 February 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 17-19,21 and 31-50 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 17-19,21 and 31-50 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
6) <input type="checkbox"/> Other: _____ |
|---|--|

Art Unit: 1711

1. The rejections based on 35 USC 112, 102, and 103 have been withdrawn based on the applicant's amendments. However, new rejections have been presented as necessitated by amendment.

Claim Rejections - 35 USC § 103

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 17-18, 31-32, 42-48, and 49-50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blum ('873) in view of Kubota Corp, and vice versa.

4. Blum teaches an aqueous binder composition comprising a polyurethane dispersion to be used as a coating (abstract). Polyurethane dispersions using aliphatic isocyanates are preferred (col. 5 lines 24-35). The coatings are useful as basecoats or topcoats for fiber cement building materials, where the coatings are preferably cured at temperatures from room temperature to 80 °C (col. 7 lines 1-21). Thus, the reference teaches thermal curing of the coatings at temperatures lower than 100 °C. Note that the making of a "fiberboard cement siding product" is deemed an intended use. Thus, since a coated fiberboard cement product could be used as a siding product, it is the examiner's position that this limitation is anticipated by the reference. Although Blum teaches the coatings as basecoats and topcoats, the reference does not exemplify a method of providing a fiberboard cement substrate, coating the surface with a decorative coating, coating the first coating with a top coating, and curing the top coating. Kubota Corp demonstrates that such a process is conventional in the fiber-

Art Unit: 1711

reinforced cement board art. Kubota teaches forming a basecoat on the surface of a fiber-reinforced cement board substrate, providing an ink layer on the base coat, and applying a clear coating on the ink layer (abstract). The clear paint coating is used to protect the underlying coatings and substrate from weathering [0007]. Thus, it is the examiner's position that it would have been prima facie obvious to form the structure of Kubota Corp's teaching in Blum's invention to provide fiber cement board substrates having a desired appearance but also having a protective clear coating.

5. Kubota Corp applies as above, teaching the method of applying a basecoat to a fiber-reinforced cement substrate, applying an ink pattern, and finally applying a clear topcoating. However, the reference does not teach the composition of the top coating. Blum teaches polyurethane dispersion coatings that are useful as top coatings on fiber cement substrates. The coatings are preferably thermally cured at temperatures of room temperature to 80 °C. The coatings have been shown to have improved solvent resistance while reducing the amount of organic solvents needed for coating (examples; col. 1 lines 15-45). Thus, it is the examiner's position that it would have been prima facie obvious to use Blum's polyurethane dispersion coatings as the clear coatings in Kubota Corp's invention to form coatings having improved solvent resistance while minimizing the amount of organic solvent used in the process.

6. Regarding the claimed molecular weights, Blum teaches the use of polyester polyols having number average molecular weights of 500-50,000 (abstract). Since the polyols themselves can have molecular weights as high as 50,000, it is the examiner's position that it would have been prima facie obvious to form a polyurethane having a

Art Unit: 1711

high molecular weight in the expectancy of forming a coating with equivalent solvent resistance.

7. Regarding the claimed acid numbers, note that Blum teaches polyester polyols having acid numbers of ≤ 10 and ≤ 15 (examples). Since the polyurethane dispersions are made by the same types of reactants as those used by the applicant, it is the examiner's position that the polyurethane dispersions of Blum would possess the applicant's claimed acid numbers. Also, note that it has been shown that polyester polyurethane dispersions made by neutralizing polyester polyurethanes conventionally possess acid numbers within the applicant's claimed range, where the starting polyesters have the same acid numbers as those of the primary reference (Blum et al. '209, col. 1 line 52-col. 2 line 17; col. 3 lines 34-38). From this showing, it is the examiner's position that the polyurethane dispersions of Blum '873 would possess the claimed acid numbers.

8. Claims 33-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blum ('873) in view of Kubota Corp, or vice versa, as applied to claims 17-18, 31-32, 42-45, and 49-50 above, and further in view of Takahashi ('352).

9. Blum and Kubota Corp apply as above, teaching protective top coating layers but failing to specify the thickness of the top layer or the use of abrasion resistance agents. Takahashi teaches polyurethane coatings for fiber cement substrates, also teaching the conventionality of using protective layers at a thickness of 5-30 μm (col. 7 lines 1-2). It is the examiner's position that it would have been prima facie obvious to one of ordinary

Art Unit: 1711

skill in the art to use a conventional coating thickness for the top coatings in Blum and Kubota Corp to optimize solvent resistance and protection of the underlying layers.

10. Furthermore, Takahashi teaches the conventionality of adding particles to the surface protective layers to improve abrasion resistance of the articles (col. 4 lines 52-67). Because the coatings of Blum and Kubota Corp serve to protect underlying layers of a building material, it is the examiner's position that it would have been prima facie obvious to include additives in the top coatings known to improve the abrasion resistance of the articles.

11. Claims 19 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blum ('873) in view of Kubota Corp, or vice versa, and Takahashi ('352) as applied to claims 33-41 above, and further in view of Harper et al.

12. The references apply as above, noting the use of cement fiberboard substrates but failing to note the distinct compositions of those substrates. Harper discloses non-asbestos corrugated sheets comprising amounts of silica, cement, and cellulose fibers to form sheets suitable for external cladding and roofing (abstract). The densities of the sheets exceed 1400 kg/m^3 (1.4 g/cm^3) (col. 3 lines 1-4). These sheets have improved strength and durability for asbestos-free products (col. 1 lines 48-52). Thus, it is the examiner's position that it would have been prima facie obvious to use the substrates of Harper's invention for the composites of Blum, Kubota Corp, and Takahashi to produce a product having improved strength and durability.

Art Unit: 1711

Response to Arguments

13. Applicant's arguments with respect to claims 17-19 and 21 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melanie D. Bissett whose telephone number is (571) 272-1068. The examiner can normally be reached on M-F 8-4:30.

Art Unit: 1711

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (571) 272-1078. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

mdb



James J. Seidleck
Supervisory Patent Examiner
Technology Center 1700